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PATIENT MEDICAL TUBING AND
CATHETER ANCHOR AND SUPPORT

TECHNICAL FIELD

This invention relates to patient medical tubing securement devices and, more particularly, to medical tubing and catheter anchors for permanently, securely anchoring and supporting percutaneous catheters and/or medical tubing to a patient's skin.

BACKGROUND OF THE INVENTION

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Certain medical treatments require the use of percutaneously inserted catheters to direct fluids, such as parenteral liquid or medication directly into a patient's blood stream. After a catheter is percutaneously inserted into a patient at a desired location, the catheter is commonly anchored to the patient by a health care provider, such as, a nurse or a doctor. A common method of anchoring a catheter or medical tubing to a patient's skin includes applying surgical tape over an exposed portion of the catheter or tubing and the patient's skin, or forming a safety loop in tubing, connected to the catheter, and taping the looped tubing to the skin of the patient.

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Such taping of a catheter and/or medical tubing to a patient is often ineffective to permanently, securely anchor and support the catheter and/or medical tubing to a patient's skin. Also, the

taped down tubing is in direct contact with the patient's skin, which is often reported as being uncomfortable.

5 Other known anchor devices releasably secure a catheter and/or medical tubing to a patient and these too are often ineffective to permanently, securely anchor and support the catheter and/or medical tubing to a patient's skin.

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SUMMARY OF THE INVENTION

The present invention provides an anchor and support for effectively, permanently anchoring
15 and supporting a catheter and/or its associated medical tubing about a patient's body.

According to the invention, the anchor includes a longitudinally extending conformable base
20 formed of woven or nonwoven fabric having a non-adhesive upper surface and a lower surface including a medical grade adhesive thereon for attachment to the skin of a patient's body. An attachment member, formed of a fabric, light weight cellular material or
25 similar, is connected to the upper surface of the base to provide a supporting surface for receiving and supporting a catheter and/or medical tubing. The attachment member includes a center portion and at least one longitudinally extending locking strip
30 extending from one end of the center portion and at least one other longitudinally extending locking strip extending from the other end of the center portion. Each locking strip has non-adhesive lower

surfaces and upper surfaces with a permanent adhesive thereon adapted to engage and permanently adhere to a catheter and/or associated medical tubing.

5 In a preferred embodiment, the upper surface of the center portion may have an adhesive thereon for initially attaching a catheter and/or medical tubing, before the locking strips are folded toward one another, over the center portion, to
10 encapsulate a portion of the catheter and/or medical tubing and provide a permanent attachment.

 In a preferred embodiment, perforations may be provided between the locking strips and the center
15 portion operative to tear the locking strips from the center portion.

 For storage and shipping purposes, the adhesive surfaces of the anchor may be covered with
20 removable release layers, which act as covers for the adhesive surfaces of the anchor to prevent the loss of adhesion and unintentional sticking.

 After the removable release layers are
25 removed from the anchor, the anchor may be applied to the patient's skin proximate a catheter and/or medical tubing. The catheter is then rested on the upper surface of the center portion and the locking strips are subsequently folded over the catheter and
30 the center portion to retain the catheter between the center portion and the locking strips. After a period of time, when the catheter or its associated tubing needs to be removed, the locking strips may be

unattached from the center portion, by tearing the strips from the center portion along the perforations, to allow the catheter to be removed.

5 These and other features and advantages of the invention will be more fully understood from the following detailed description of the invention taken together with the accompanying drawings.

10 **BRIEF DESCRIPTION OF THE DRAWINGS**

In the drawings:

FIG. 1 is an exploded perspective view of a
15 patient medical tubing and catheter anchor and support for securing and anchoring a catheter and medical tubing to a person's skin constructed in accordance with the present invention;

20 FIG. 2 is a plan view of the anchor of FIG. 1;

FIG. 3 is an environmental view illustrating the anchor of FIG. 1 adhered onto a
25 person's hand with a catheter and tubing positioned thereon;

FIG. 4 is an other environmental view similar to FIG. 3 wherein the anchor is retaining the
30 catheter and tubing; and

FIG. 5 is a schematic side view of the anchor of FIG. 1 in an operative disposition wherein the anchor is retaining a catheter and tubing.

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DETAILED DESCRIPTION OF THE INVENTION ..

Referring now to the drawings in detail, numeral 10 generally indicates an exemplary embodiment of a patient medical tubing and catheter anchor and support. As is hereinafter more fully described, anchor 10 permanently, securely anchors and supports a catheter and/or medical tubing on a patient's skin, avoids the problems inherent in taping, and allows for easy maintenance of a patient catheter.

Referring to FIGS. 1 and 2 of the drawings, the anchor 10 includes a conformable base 12 including a layer formed of flexible woven or nonwoven fabric or other suitable material. The base 12 extends longitudinally and has a non-adhesive upper surface 14 and a lower surface 16 including a medical grade adhesive adapted for attachment to the skin surface of a patient's body. An attachment member 18 connected to the upper surface 14 of the base 12 includes a center portion 20 and at least one longitudinally extending locking strip 21 extending from an end 22 of the center portion and at least one longitudinally extending locking strip 23 extending from an other end 24 of the center portion. It should be understood that only the center portion 20 of the attachment member 18 is adhesively attached to a midportion 25 of the upper surface 14 of the base

12 so that the locking strips 21, 23 are free to be
folded toward one another over the center portion 20.

Each of the locking strips 21, 23
5 respectively have non-adhesive lower surfaces 26, 28
and upper surfaces 30, 32 with a permanent adhesive
thereon adapted to engage and permanently adhere to a
catheter and/or medical tubing and an upper surface
34 of the center portion 20.

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The center portion 20 may be formed of a
fabric, light weight cellular material or similar
conformable material, to act as a cushioning pad
adapted to support and space a catheter and/or
15 medical tubing a distance from a patient's skin.

In a preferred embodiment, the locking
strips 21, 23 include perforations 35 adjacent the
ends 22, 24 of the center portion 20 for tearing the
20 strips from the center portion.

In a preferred embodiment, the upper
surface 34 of the center portion 20 has an adhesive
thereon adapted to adhere to a catheter and/or
25 medical tubing and the upper surfaces 30, 32 of the
locking strips 21, 23. Alternatively, the upper
surface 34 of the center portion 20 may have a non-
adherent surface adapted to adhere to the adhesive
upper surfaces 30, 32 of the locking strips 21, 23
30 when the strips are folded toward one another, over
the center portion, in an overlapping relation.

For storage and shipping purposes, a removable non-adhesive release layer 36 of known construction may cover the adhesive lower surface 16 of the base 12 to prevent the base from inadvertently sticking to an object or losing its adhesive qualities. Additional removable release layers 38, 40 may cover the adhesive upper surfaces 30, 32 of the locking strips 21, 23 to prevent the locking strips from sticking or losing their adhesive quality. An additional removable release layer 42 may cover the adhesive upper surface 34 of the center portion 20 to protect the adhesive and prevent the center portion from sticking to an object before a desired application.

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Referring to FIGS. 3-5, in operation, a health care provider, such as a nurse or the like, removes the release layer 36 from the lower surface 16 of the base 12 and attaches the lower surface 16 to a patient's skin, proximate a catheter C. The catheter C is then positioned over the center portion 20 of the attachment member 18, as shown in FIG. 3. When adhesive is present on the upper surface 34 of the center portion 20, the adhesive initially retains the catheter C on the center portion 20. The release layers 38, 40 are then removed from the locking strips 21, 23. Locking strip 21 is then folded over the center portion 20, toward locking strip 23, so the upper surface 30 of locking strip 21 engages the catheter C. This retains the catheter C between the locking strip 21 and the center portion 20 of the anchor 10. If desired, locking strip 23 may be folded over the center portion 20, toward locking

strip 22, so that the adhesive upper surface 32 of the locking strip engages the lower surface 26 of the locking strip 21 to improve the anchoring effect of the anchor on the catheter C, as shown in FIGS. 4-5.

5 While the catheter C is retained by the anchor 10, the attachment member 18 spaces the catheter a distance from the patient's skin and acts as a cushioning pad between the patient's skin to improve patient comfort.

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If desired, a combination of catheters and medical tubing may be positioned on the center portion 20, to allow a single anchor 10 to retain multiple catheters or tubes. Once the combination of
15 catheters and medical tubing are positioned on the center portion 20, the locking strips 21, 23 are folded toward one another, over the center portion 20, to retain the combination of catheters and tubing.

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After a period of time, when the catheter C or tubing T requires replacement or removal, the catheter C or tubing T may be removed by tearing the locking strips 21, 23 along the perforations 35
25 extending adjacent the ends 22, 24 of the center portion 20. When the catheter C is no longer needed, the anchor 10 and catheter can be removed simultaneously by detaching the base 12 from the patient's skin and pulling the catheter C from the
30 patient.

It should be understood that the anchor 10 may be attached to a patient before a catheter is

inserted, to provide an immediate anchor for the catheter after insertion.

It should also be understood that the above
5 described anchor 10 is not limited to use with IV
catheters. The present invention may be used in
conjunction with other types of medical lines such as
tubes for fluid communication, electrical wires,
CVCs, PICCs, Foley catheters, hemodialysis catheters,
10 surgical drainage tubes, feeding tubes, chest tubes,
nasogastric tubes, scopes, as well as with electrical
wires or cables connected to external or implanted
electronic devices or sensors.

15 Although the invention has been described by
reference to certain specific embodiments, it should
be understood that numerous changes may be made within
the spirit and scope of the inventive concepts
described. Accordingly, it is intended that the
20 invention not be limited to the described embodiments,
but that it have the full scope defined by the
language of the following claims.